

IN simple terms, the difference between raster and vector data is the former is 'dumb' and the latter 'intelligent'. Raster data is basically a facsimile of the paper chart, and is actually the method by which the data is stored for preparation of the paper charts. Chris Smith, technical implementation manager at UKHO says, "feedback indicates that the continuous display of own ship position (and selected radar targets) relative to the charted information is, to the user, the single most important feature of an electronic chart system."

Both systems will provide this. However, although the more complicated functions are not widely used at present, he believes "it is a general rule that users' expectations and requirements increase over time and so this will no doubt change."

With ECDIS, various alarms and warnings are automatically activated by the ENC data itself (if a vessel is about to cross its safety contour for

Raster or vector

What is the difference?

example). With RCDS these alarms and warnings can only activate if the mariner has first entered the appropriate feature, for example the safety contour, into the vector overlay to the RNC. However, what should be borne in mind is that this is no different to annotating the paper chart when passage planning.

Elements of ENC data can be de-selected to enable the mariner to concentrate on just those elements important to his current navigation circumstances. With RNC, such selection is not possible.

However, it must be pointed out that this function could have serious consequences if operated accidentally, therefore considerable training will be required if the full functionality of the ENC is to be used safely.

ENC data has the potential to be interrogated for additional data about the chart information displayed. RNC data cannot sensibly support this capability.

However, responses from RCDS users at sea have not identified these differences as being damaging to safe navigation. Rear Admiral John Clarke, chief executive of the UK Hydrographic Office, says, "The argument is often advanced that RCDS provides a good stepping stone to ECDIS." He goes on to say, "with particular regard to the inability to de-select data, the observation is often made that one should first familiarise the mariner with electronic navigation using a conventional and clearly understood screen display, then introduce him to the concept of electronic navigation with selective data display on ECDIS."

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